

The University of Western Ontario School
of Health Studies

Research Methods in Health Sciences:

HS2801A

Sep-Dec 2022

Instructor: Dr. Afshin Vafaei

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Office Hours: Fridays 12:30 AM to 2:00 PM or by appointment

Location: Health Sciences Building – Room 215

TAs:

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Times: Fridays 9:30-11:30 Lab/tutorial

Fridays 10:30-12:30 Lecture

Location: Middlesex College (MC)– Room 110

Course Website: <https://owl.uwo.ca/>

Prerequisite Checking

Minimum of 60% [mandatory] in each of Health Sciences 1001A/B and Health Sciences 1002A/B.

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course, and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees if you are dropped from a course for failing to have the necessary prerequisites.

Course Description

An introduction to the design of health sciences research, providing students with knowledge relevant to the planning and evaluation of research in both laboratory and applied settings.

Learning Objectives

By the end of the course, the students should be able to:

1. Understand and define basic terms, concepts, and methods used in health research;
2. Propose appropriate research methods (e.g. study design, data collection, sampling) for specific research questions;
3. Identify key ethical issues (e.g. consent) as they apply to conducting health research;
4. Understand and identify basic methodological issues related to reliability and validity impacting research processes; and
5. Develop transferrable skills in health research methods, including, but not limited to: citations, constructing surveys and interviews, and other measurements.

Textbook, Tools

1. **REQUIRED TEXTBOOK:** Jacobsen, Kathryn H. (2021). Health Research Methods: A Practical Guide (3rd edition). Burlington, MA: Jones & Bartlett.

https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2022A&courses%5B0%5D=001_UW/HTH2801A

2. A scientific calculator
3. Additional course readings on OWL

Class Schedule (subject to change)

DATE	TOPICS	READINGS	TUTORIAL (TBD)
Construction of a research project			
Sep. 9	Course Outline Review & Expectations The Health Research Process, Selecting a topic/Research Question, Theory in Research	Chapters 1, 2, 4	
Sep. 16	Data collection, Sampling, Questionnaire Design	Chapters 19, 20	
Methods of conducting health research			
Sep. 23	Measurement, Reliability, Validity,	EXTRA	
Sep. 30	Bias, random error, confounding	EXTRA	
Oct. 7	Research Study Design (1): Overview, Case Series, Ecological, Cross-sectional Studies	Chapters 7, 8, 14, 9	
Oct. 14	Research Study Designs (2): Case- Control, Cohort Studies	Chapters 10, 11, 12	
Oct. 21	Research Study Designs (3): Experimental Studies	chapter 15	
Oct. 28	MIDTERM TEST		
FALL TERM READING WEEK (Oct. 31-Nov. 4)			
Nov. 11	Review of the Midterm Research Study Designs (4): Qualitative Studies	chapter 13	
Nov. 18	Descriptive statistics, Introduction to Comparative Statistics	Chapters 29, 30	
Communicating research ideas and results			
Nov. 25	Collaboration, Community Partnerships	Chapters 5, 6	
Dec. 2	Knowledge Translation Wrap up	Chapters 34, 39, 40	
Chapters refer to the required textbook (Jacobson 2021)			

Statement on contingency plan for in-person class pivoting to online learning:

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any remaining assessments will also be conducted online as determined by the course instructor.

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, tests and examinations in this course will be conducted using a remote

proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide personal information (including some biometric data) and the session will be recorded. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western’s Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.

Statement on Multiple Choice Exams:

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Statement on Use of Electronic Devices:

During Exams: Unless you have medical accommodations that require you to do so, or explicit permission from the instructor of the course, you may not use any electronic devices during ANY tests, quizzes, midterms, examinations, or other in-class evaluations.

During Lectures and Tutorials: Although you are welcome to use a computer during lecture and tutorial periods, you are expected to use the computer for scholastic purposes only, and refrain from engaging in any activities that may distract other students from learning. From time to time, your professor may ask the class

Assessment	Weight of Final Mark	Due Date
Online modules	10% (5% each)	Sep. 30, 2022 Nov. 18, 2022
Midterm	25%	Oct. 28, 2022
Final Exam	45%	During the exam period (April 10-30)
Tutorial Activities	20%	Ongoing

to turn off all computers, to facilitate learning or discussion of the material presented in a particular class.

Unless explicitly noted otherwise, you may not make audio or video recordings of lectures – nor may you edit, re-use, distribute, or re-broadcast any of the material posted to the course website.

Evaluation and assignments

By **November 9th**, 2022, students will know 30% of their final grade.

Participation/Tutorial Activities: 20% of the overall grade

Students are encouraged to contribute to creating a dynamic learning environment. There will be opportunities for constructive discussions and brief but structured in-class lab activities. Depending on the nature of the activity, students are expected to complete the activity in-class or submit their work to OWL. There will be 10+ in-class participation activities randomly throughout the term - students must attend at least 6 of these events to get a full grade

Online Modules: 10% of the overall grade

CORE ethics principles in health research (due: Sep 30th). Following the instructions provided by The Canadian Institutes of Health Research (CIHR), students will learn about the core ethics principles of health research. Submission of the CORE-2022 Certificate of Completion to OWL is required for a full (10%) mark. https://ethics.gc.ca/eng/education_tutorial-didacticiel.html

Sex and gender in health research (due: Nov.18th). Institute of Gender and Health at the CIHR provides three modules on Integrating Sex & Gender in Health Research. Submission of certificates of at least two (2) of the courses to OWL is required for a full (10%) mark.

Midterm and Final Exams: 25% and 45% of the overall grade

Midterm exam will be held on October 28th, 2022. The goal is assessment of understanding topics covered in weeks 1 to 7 before they are jammed for the final exam.

Final exam will evaluate students' deep understanding of **ALL** course materials and will be scheduled by the Office of the Registrar during the formal exam period (Dec XX to Dec XX; 2022).

Missed work

Attendance to all classes is **mandatory**, and it is not possible to provide equal opportunity for all students to make-up the missed classes. **All materials** covered in the classes are **testable**. If you are absent from a graded class activity, you will receive a zero on the activity.

Missed Exams

If you are too ill to write a quiz or exam or there are other 'extenuating circumstances beyond your control' you **must** document this either with a medical certificate (if available) or by notifying the instructor in writing (with your signature). If you are ill for an extended period of time, it is your responsibility to contact the instructor immediately on your return to campus.

Only **one** make-up time will be scheduled for missed midterm one week after on **October 26**. **TENTATIVE final examination make-up** dates will be provided when the Final Exam schedule is released in October.

ADDITIONAL STATEMENTS

Statement on Academic Offences:

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: [Academic Calendar - Western University \(uwo.ca\)](http://www.uwo.ca/academiccalendar/)

Statement on Academic Consideration:

The University recognizes that a student's ability to meet their academic responsibilities may, on occasion, be impaired by extenuating circumstances, including short-term illness or injury. Reasonable academic consideration is a cooperative process between the University, the student, and academic staff. All participants in the process must act in good faith, and fulfil their respective obligations, if it is to succeed.

Students who experience an extenuating circumstance (illness, injury, or other extenuating circumstance) sufficiently significant as to temporarily render them unable to meet academic requirements, may submit a request for academic consideration through the following routes:

- (i) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner, in order to be eligible for Academic Consideration; or
- (ii) For non-medical absences, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to academic advising office in their Faculty of registration, in order to be eligible for academic consideration.

Students seeking academic consideration:

- Are advised to consider carefully the implications of postponing tests or midterm exams or delaying handing in work;
- Are encouraged to make appropriate decisions, based on their specific circumstances, recognizing that minor ailments (e.g., upset stomach) or upsets (e.g., argument with a friend) are not normally an appropriate basis for a self-reported absence;
- **Must communicate with their instructors no later than 24 hours** after the end of the period covered by the SMC, or immediately upon their return following a documented absence;
- **Are advised that all necessary documentation, forms, etc. are to be submitted to academic advising office within two business days after the date specified for resuming responsibilities**

Support Services:

There are various support services around campus and these include, but are not limited to:

1. Student Development Centre -- <http://academicsupport.uwo.ca/>
2. Student Health -- <https://www.uwo.ca/health/>
3. Registrar's Office -- <http://www.registrar.uwo.ca/>
4. Ombudsperson Office -- <http://www.uwo.ca/ombuds/>

Health and Wellness:

The undergraduate experience is rewarding and challenging socially, emotionally, and intellectually. Finding ways to balance scholarly life with our personal lives can be tough, but it's important to learn how to manage stress. Western provides several health and wellness-related services to students, which may be found at <http://www.health.uwo.ca/>. You can also check out the Campus Recreation Centre or the McIntosh Gallery (<http://www.mcintoshgallery.ca/>), for alternative spaces to reconnect with your bodies and restore your spirit. You may also want to access local resources that are closer to where you are living during the school year. Recalibrating ourselves emotionally begins with slowing down, reminding ourselves that we are ok, and taking a few deep, slow breaths. This remarkably effective strategy brings the body from stress mode into a more relaxed state.

If you are in emotional or mental distress should refer to Mental Health@Western [Mental Health Support - Health & Wellness - Western University \(uwo.ca\)](mailto:Mental_Health_Support@uwo.ca) for a complete list of options about how to obtain help or Thames Valley Family Services (<https://www.familyservicethamesvalley.com/>), a trusted provider within the community. To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: [Health & Wellness - Western University \(uwo.ca\)](http://www.health.uwo.ca/health-wellness). It's also advisable to have a wellness safety plan if you don't want to reach out to formal services. Having the numbers of a few trusted individuals is another strategy.

Grading scheme:

This grading scheme, which is the university-wide scale that has been approved by the Western University Senate will be used in this course. It should also be noted that **I DO NOT ROUND UP MARKS.**

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work that is clearly above average
B	70-79	Good work, meeting all requirements and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable.
F	below 50	Fail

It is expected that the grades for this course will fall **between 70-74%**. In the event that the course average falls outside this range, a constant may be added (or subtracted) from each student's grade, by the instructor, to bring the class average in line with school policy. It is anticipated that the course averages in years 1 through 4 grades will vary and this is the normative breakdown of average grades/year